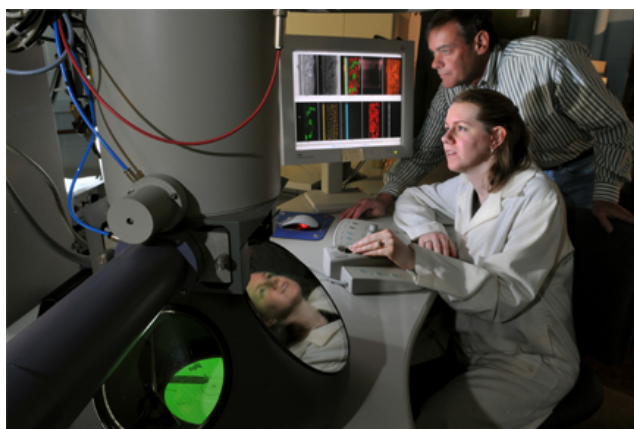


# FEI Tecnai F20ST TEM/STEM



## Instrument capabilities:

1. Instrument specifications:
  - a) Accelerating voltages: 80-200 kV
  - b) Schottky FEG emitter
  - c) Resolution (at 200 kV):  $\sim 0.24$  nm point;  $\sim 0.1$  nm line; probe size  $\sim 0.2\text{--}1$  nm
2. Operating modes:

CTEM, STEM (BF/ADF, HAADF), CBED, SAED, light element XEDS, PEELS, spectrum imaging, energy-filtered imaging (EFI), Lorentz magnetic imaging (LMI), electron holographic imaging (EHI), other computationally-mediated modes, digital image capture with a 16 Mpixel CCD camera.
3. EMC-owned specimen holders:
  - a) Double Tilt ( $\pm 40^\circ \alpha$ ,  $\pm 30^\circ \beta$ ):
    - with Be cup for XEDS
    - liquid  $N_2$  cooled (96 K) with Be cup
    - heating (1270 K)
  - b) In-plane magnetic field (tilt  $\pm 40^\circ$ )
  - c) Liquid He cooled (tilt  $\pm 40^\circ$ , rotate  $360^\circ$ )
4. User-owned specimen holders: STM, AFM, nano-biasing, tomography

## Typical experiments (examples):

- Magnetic and electric field imaging
- Chemistry of nano structures
- EFI and/or spectrum imaging of heterostructures
- 3D elemental mapping
- *In situ* site-specific friction measurements
- High angular-resolution electron channeling electron spectroscopy